



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Applicant: Bernhardt

Application No.: 10/001,513

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Title: Safety Systems for Grinding Machines

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**BRIEF FOR APPELLANT**

This brief is filed in support of Applicants' Appeal from the final rejection mailed October 23, 2003. As the rejection was "final," an appeal is appropriate. Consideration of the application and reversal of the rejections are respectfully urged.

**1. Real Party in Interest**

The real party in interest is among the following: Applicant Jurgen Bernhardt, Biedenkopf-Weifenbach, GERMANY; Applicant Harmut Hoffman, Bad Laasphe-Feudingen, GERMANY; and Convenience Food Systems Wallau GmbH & Co. KG, Biedenkopf-Wallau, GERMANY.

**2. Related Appeals and Interferences**

To Applicants' knowledge, there are no related appeals or interferences.

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### **3. Status of Claims**

Claims 1-64 have been presented in this application. Claims 37-41 and 43-64 stand rejected. Claim 42 is objected to as dependent on a rejected base claim, but is otherwise considered allowable. Claims 1-36 have been canceled and are withdrawn from consideration.

### **4. Status of Amendments**

All amendments in this case have been entered.

### **5. Summary of Invention**

Applicants now provide a concise explanation of the invention defined in the claims involved in the appeal, referring to the specification by page and line number, and to the drawings by reference characters.

The invention defined in claim 37 is a grinding machine (reference character 13, fig.3). The grinding machine has a direction of material flow, with at least one blade (reference characters 4, and 15, figs. 1 and 2) which defines the last blade located in the direction of material flow. The grinding machine also comprises a safety device in the form of a plate perforated by holes (reference character 5 and 6, figs. 1 and 2). Each hole in the plate has a diameter less than or equal to 6 millimeters. (This is described at page 2, lines 9-11).

A second embodiment of the invention defined in claim 38 comprises a means which responds to whether or not the safety device is present and prevents the grinding machine from operating when the safety device is not in place. (This is described at page 3, lines 4-6, and lines 13-20).

A third embodiment of the invention defined in claim 43 comprises a plate which is perforated by holes. The holes in the plate each have a diameter less than or equal to 6 millimeters. (This is described at page 2 lines 9-11) (reference character 5 and 6, figs. 1 and 2) The plate also comprises a means on which data can be stored and retrieved to permit unequivocal identification of the plate. (This is described at page 3 lines 8-11)

A fourth embodiment of the invention defined in claim 51 comprises more than one plate which is perforated by holes. (reference character 5 and 6, figs.1 and 2) The holes have diameters less than or equal to six millimeters. (This is described at page 2, lines 9-11) Each plate also comprises a means on which identification data can be stored and retrieved that permits identification of each plate. (This is described at page 3 lines 8-11) Each plate also has unique identification data with respect to each of the other plates. (This is described at page 3 lines 8-11)

A fifth embodiment of the invention defined in claim 59 comprises a grinding machine. (reference character 13, fig.3) The grinding machine has a downstream direction of material flow along a path. The grinding machine comprises a plate located within the path. The plate is perforated by holes. The holes each have a diameter less than or equal to 6 millimeters. (This is described at page 5, lines 13-15 and page 2 lines 9-11) (reference character 5 and 6, figs. 1 and 2) The plate further comprises a means on which data can be stored and retrieved that permits unequivocal identification of the plate. (This is described at page 3 lines 8-11)

A sixth embodiment of the invention defined in claim 61 is a method for using a grinding machine having a downstream direction of material flow along a path. (This is described at page 1, lines 19-22) The path has at least a last blade along the direction of material flow. (This is described at page 1, lines 19-22) (reference characters 4 and 15, figs. 1, 2) The grinding machine comprises a plate located within the path downstream of the last blade. (This is described at page 7, lines 15-19 and page 5, lines 17-19) (reference character 6, figs. 1, 2) The plate is perforated with holes and comprises means for storing respective identification data. (This is described at page 3 lines 8-11) The method comprises the steps of retrieving the respected identification data and checking whether the plate satisfies predetermined safety standards. (This is described at page 3, lines 27-32; page 4, lines 1-4; and page 5 lines 21-28)

**6. Issues on Appeal**

1. Are claims 37, 38, and 41 anticipated under 35 U.S.C. 102(b) by Rudibaugh, U.S. Patent No. 5,092,528 (“Rudibaugh”)?
2. Would claim 39 have been obvious over the teaching of Rudibaugh?
3. Would claims 40, and 43-64 have been obvious over the teaching of Rudibaugh as applied to claim 37 in combination with the teaching of Gülke, U.S. Patent No: 6,382,539 (“Gülke”)?

Applicants submit that all of these questions should be answered in the negative.

**7. Grouping of Claims**

With respect to the first issue, claims 37 is argues alone and stands or falls alone.

With respect to the first issue, claim 41 is argued alone and stands or falls alone.

With respect to the first issue, claim 38 is argued alone and stands or falls alone.

With respect to the second issue, claim 39 is argued alone and stands or falls alone.

With respect to the third issue, claims 40 is argued alone and stands or falls alone.

With respect to the third issue, claims 43-50 are argued as a group and stand or fall together.

With respect to the third issue, claims 51-58 are argued as a group and stand or fall together.

With respect to the third issue, claims 59-60 are argued as a group and stand or fall together.

With respect to the third issue, claims 61-64 are argued as a group and stand or fall together.

## **8. Argument**

### **First Issue on Appeal**

#### *Claim 37*

On page 2 of the Office Action mailed October 23, 2003, the Examiner rejects Claim 37 under 35 U.S.C. 102(b) as being anticipated by *Rudibaugh*. The Examiner refers back to his earlier rejection which states that Rudibaugh discloses “the use of a perforated plate in a grinding machine, the plate holes having a diameter of less than 6 millimeters.”

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). “The identical invention must be shown in as complete detail as is contained in the... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (fed. Cir. 1989). The elements must be arranged as required by the claim. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

The present invention as claimed by Claim 37 is: “A grinding machine having a direction of material flow, with at least one blade defining a last blade in the direction of material flow, and a safety device downstream of the last blade in the direction of material flow, the safety device comprising a plate perforated by holes, each hole having a hole diameter less than or equal to 6 millimeters.” Thus, the perforated plate as claimed by the present application is always located below the last blade in the direction of material flow.

The grinding machine disclosed by Rudibaugh comprises, in the direction of the flow of the material, a blade 38, a perforated plate 23, a three bladed rotary discharge impeller 25, and an outlet 26. The three bladed rotary discharge impeller 25 is a blade and is this blade is located downstream of the perforated plate, thus the elements of Rudibaugh are not arranged as required by the claim, and therefore there is no anticipation. In addition, since the three bladed impeller is located between the perforated plate and the output of the unit, the impeller could injure an

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operator simply by an operator sticking a finger into the output. Therefore, the perforated plate of Rudibaugh serves no utility as a safety device.

#### *Claim 41*

On page 2 of the Office Action mailed October 23, 2003, the Examiner rejects Claim 41 under 35 U.S.C. 102(b) as being anticipated by *Rudibaugh*. The Examiner refers back to his earlier rejection which states that Rudibaugh discloses “the use of a perforated plate in a grinding machine, the plate holes having a diameter of less than 6 millimeters.”

As quoted above, “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.”

*Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Claim 41 is dependent on Claim 37 and has an additional limitation in that there “is defined a cumulative operating time of the grinding machine with a particular plate, further characterized in that the machine cannot be put into operation after a predetermined operating time has elapsed with respect to the particular plate.” Nowhere in Rudibaugh is a such an operating time expressly or inherently described with respect to the perforated plates within that invention.

Reversal of the rejection is requested for claims 37 and 41.

#### *Claim 38*

On page 2 of the Office Action mailed October 23, 2003, the Examiner rejects Claim 38 under 35 U.S.C. 102(b) as being anticipated by Rudibaugh. The Examiner refers back to his earlier rejection which states that Rudibaugh discloses “the use of a perforated plate in a grinding machine, the plate holes having a diameter of less than 6 millimeters.”

As stated above, anticipation of a claim can only occur if each and every element as set forth in the claim is found in a prior art reference.

The present invention as claimed by Claim 38 is: "The grinding machine of claim 37 further comprising means responsive to a presence of the safety device for preventing the machine from being put into operation when the safety device is not in place."

As Claim 38 is dependent on Claim 37, the same arguments discussed above also apply. Rudibaugh comprises a blade located downstream of the perforated plate. Therefore, the elements of Rudibaugh are not arranged as required by Claim 37 or Claim 38, and there is no anticipation. As discussed above, the three-bladed impeller of Rudibaugh is located between the perforated plate and the output of the unit. Because this impeller could injure an operator simply by an operator sticking a finger into the output, the perforated plate of Rudibaugh serves no utility as a safety device. However, the design of the present invention, as claimed and as described at page 1 (last paragraph) of the specification, requires a specific positioning of the perforated plate in order to make it a safety device which permanently prevents the operator from sustaining finger injuries. Claim 38 takes this an additional step by including a further limitation of preventing the machine from being put into operation when the safety device/perforated plate is not in place. Applicant is unable to find anything in the content of Rudibaugh describing the positioning of the perforated plate claimed in the present invention nor the specific limitation of the present invention's Claim 38 which prevents the machine from being put into operation without the safety device of the perforated plate being properly in its place.

Reversal of the rejection is requested for Claim 38.

### Second Issue on Appeal

#### *Claim 39*

On page 2 of the Office Action mailed October 23, 2003, the Examiner rejects Claim 39 under 35 U.S.C. 103(a) as being unpatentable over Rudibaugh. The Examiner refers back to his earlier rejection which states that:

The exact thickness of the plate [of Claim 39] would have been an obvious design choice only depending on several factors such as material being treated and

desired maintenance costs.

The present invention as claimed by Claim 39 is: "The grinding machine of claim 37 wherein the plate has a thickness of at least 5 millimeters."

Applicant fails to find contents that might suggest the desirability of selecting a plate thickness of at least 5 millimeters with the ultimate aim of avoiding finger injuries anywhere in Rudibaugh. In addition, nothing is said in the claimed invention about the thickness of the plate being selected according to the material being treated or according to a desired maintenance costs. Specifically, it is disclosed on page 2 of the claimed invention's specification that this thickness is actually monitored to help prevent finger injuries.

In order to render a claim limitation obvious, the reference must suggest the desirability of the limitation and thus its obviousness. Nowhere has the Examiner explained how it would be obvious, based on viewing the present invention or the reference as a whole, to select a perforated plate with that has a minimum thickness, with the aim of avoiding finger injuries.

Reversal of the rejection is requested for Claim 39.

### Third Issue on Appeal

#### *Claim 40*

On page 2 of the Office Action mailed October 23, 2003, the Examiner rejects Claim 40 under 35 U.S.C. 103(a) as being unpatentable over Rudibaugh and further in view of Gülke. The Examiner then states "see paper number 11 for this rejection." Paper 11 refers back to the Examiner's earlier rejection mailed May 28, 2003. Nowhere in Paper 11 is there a rejection for Claim 40 under 35 U.S.C. 103(a). Nowhere in Paper 11 is there any sort of explanation as to why Claim 40 could be obvious. Applicant requests reversal of the rejection of Claim 40.

#### *Claims 43-50*

On page 2 of the Office Action mailed October 23, 2003, the Examiner rejects Claims 43-



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50 under 35 U.S.C. 103(a) as being unpatentable over *Rudibaugh* and further in view of *Gülke*.

The Examiner refers back to his earlier rejection which states that:

*Rudibaugh* does not use a sensor means to control apparatus operation which may result in damaged apparatus or an undesired product. *Gulke* solves this problem by disclosing similar apparatus including the use of a sensor chip in a grinding element to monitor particular apparatus characteristics. In order to monitor and control the apparatus, it would have been obvious for one of ordinary skill in the art at the time of the invention to modify *Rudibaugh* by placing a sensor chip in the grinding element, i.e. plate, taught to be desirable by *Gulke*.

The Examiner then states: "Note that for many of the dependent claims, the exact sensor readings taken by the chip would have been obvious design choices only once the use of a chip was known."

Claim 43 of the present invention states: "A plate perforated by holes, each hole having a hole diameter less than or equal to 6 millimeters, the plate further comprising a means on which data can be stored and retrieved that permit unequivocal identification of the plate." Dependent claims 44-50 also limit the sensor with some particularity. For example, the sensor in one claim stores information about thickness, in another claim the sensor store operating time and stress data, and so on.

It is not enough to render a claimed invention obvious by simply providing any arbitrary sensor chip as the Examiner did with *Gülke*. Instead, it would be necessary to provide, or at least to motivate providing, a sensor chip of the particular types which appear in the claim limitations which are thought by the Examiner to be obvious. Applicant is unable to find in *Gülke* any sensor chip limitations similar to those found in Claims 43-50 of the present invention.

Reversal of the rejection of Claims 43-50 is requested.

#### *Claims 51-58*

On page 2 of the Office Action mailed October 23, 2003, the Examiner rejects Claims 51-58 under 35 U.S.C. 103(a) as being unpatentable over *Rudibaugh* and further in view of *Gülke*.

The Examiner again refers back to the same section which was quoted above from his earlier

rejection.

Claim 51 of the present invention states: "A plurality of plates each perforated by holes, each hole having a hole diameter less than or equal to 6 millimeters, each plate further comprising a respective means on which identification data can be stored and retrieved that permit identification of the plate, each plate having unique identification data with respect to the others of the plates." Independent Claim 51 further limits the invention of Claim 43 and Claims 52-58 are dependent on and further limit the invention of Claim 51.

For the same reasons as discussed above regarding Claims 43-50, applicant requests reconsideration of Claims 51-58.

#### *Claims 59-60*

On page 2 of the Office Action mailed October 23, 2003, the Examiner rejects Claims 59-60 under 35 U.S.C. 103(a) as being unpatentable over *Rudibaugh* and further in view of *Gülke*. The Examiner again refers back to the same section which was quoted above from his earlier rejection.

Claim 59 of the present invention states: "A grinding machine having a downstream direction of material flow along a path, the machine comprising a plate disposed within the path, the plate perforated by holes, each hole having a hole diameter less than or equal to 6 millimeters, the plate further comprising a means on which data can be stored and retrieved that permit unequivocal identification of the plate." Claim 60 of the present invention further limits claim 59: "The grinding machine of claim 59 comprising at least a last blade in the direction of material flow, wherein the plate is located downstream of the last blade in the direction of material flow."

Again, the arbitrary sensor chip described in *Gülke* is not enough to render the claimed invention obvious. Both Claim 59 and Claim 60 of the present invention limit the sensor chip to one which has a means of storing data to permit unequivocal identification of the plate. Applicant is unable to find any such limitations in *Gülke* regarding a sensor chip.

Absent any such limitations, hint of limitations, or motivations in *Gülke*, *Gülke* cannot render the present invention obvious. Reconsideration of Claims 59-60 is requested.

*Claims 61-64*

On page 2 of the Office Action mailed October 23, 2003, the Examiner rejects Claims 59-60 under 35 U.S.C. 103(a) as being unpatentable over *Rudibaugh* and further in view of *Gülke*. The Examiner again refers back to the same section which was quoted above from his earlier rejection.

Claim 61 of the present invention states:

A method for use with a grinding machine having a downstream direction of material flow along a path and having at least a last blade along the direction of material flow, the machine comprising a plate disposed within the path and located downstream of the last blade, the plate perforated with holes, the plate comprising means storing respective identification data, the method comprising the steps of:

- retrieving the respective identification data; and
- making a check of whether the plate satisfies predetermined safety standards.

Again, the arbitrary sensor chip described in *Gülke* is not enough to render the claimed invention obvious. The arbitrary sensor chip of *Gülke* does not have the limitation of a means for storing respective identification data which then can be retrieved so that a check of whether the plate meets predetermined safety standards can be performed. As with the claims described immediately above, absent any hint of such limitations in *Gülke*, *Gülke* cannot render Claim 61 obvious.

Claims 62-64 of the present invention are dependent on Claim 61 and contain additional limitations, namely the limitation of not allowing the machine to be put into operation if certain conditions are met to prevent injuries. As *Gülke* does not seem to provide any motivation for the limitations of these claims, *Gülke* cannot render the invention in Claims 62-64 obvious.

Reconsideration of Claims 61-64 is requested.



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### **Conclusion**

For these reasons, it is requested that the rejections be reversed.

Respectfully Submitted,

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